RANGE CLEARANCE AND RIGHT-TO-KNOW REPORTING

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Abstract

Since the signing of Executive Order (EO) 12856 in 1993, Federal facilities including DoD have been reporting annual toxic chemical releases to air, land, or water and waste management to the Emergency Planning and Community Right-to-Know Act (EPCRA) Toxics Releases Inventory, also known as right-to-know (RTK) reporting. The EO required all Federal agencies to reduce reported releases by 50 percent between 1994-99. In implementing the EO, the DoD exempted all munitions activities except manufacture from RTK reporting until final policy was developed and from the EO reduction goal.

In March 1998, DoD released final policy for RTK reporting of munitions demilitarization activities. The DoD and the Services are developing a final policy for RTK reporting of munitions' intended use, including live fire and range clearance. During the same timeframe, changes to EPCRA reporting have been proposed. Both the draft policy and the proposed changes could impose new RTK reporting requirements on range clearance.

If implemented, RTK reporting of range clearance will require improved tracking and recordkeeping and will significantly increase the public awareness of emissions from munitions use. This paper reviews the requirements for and impacts of RTK reporting of range clearance.

What is Right-to-Know (RTK)?

This section describes what RTK reporting is and is not, elaborates on the reporting criteria, form, and recordkeeping requirements, describes typical uses of the reported data by regulators and public interest groups, and details the penalties for non-compliance.

RTK reporting is required by Section 313 of EPCRA as amended by the Pollution Prevention Act of 1990. As defined by these statutes and USEPA guidance, RTK reporting is a facility's annual public reporting from a facility for identified toxic chemicals and their releases to air, land, and water, onsite waste management, and offsite transfers for waste management. Reporting is not required from all facilities, or for all uses of a chemical by a facility, or of all releases and transfers of a chemical by the facility. Reports are based on known or estimated values and do not require additional monitoring or sampling. No installations or ranges will be permitted, fined, or closed due to RTK reporting alone or the installation's failure to report.

RTK reporting is not a measure of risk or hazard. Rather, it is intended to inform the community about the reporting facility's releases to the community's air, water, and land, and to encourage the community to seek further information about the actual risks and impacts of the reporting facility's activities.

RTK reporting as required by Section 313 of EPCRA is based on reporting criteria and thresholds, a reporting form, and recordkeeping.

In designing RTK reporting, the USEPA tried to balance the data benefit to the public against the reporting cost to the facility. As a result, RTK reporting is required only if a facility meets certain criteria and exceeds certain reporting thresholds. The reporting criteria and thresholds are summarized below:

* The facility must use toxic chemicals for which reporting is required. Currently, the list includes almost 600 unique chemicals or chemical categories (such as "lead compounds"). The list is based on chemicals which are believed to be toxic to human health or the environment.

* The facility must be engaged in manufacturing, electrical power generation, mining, RCRA regulated commercial hazardous waste management, solvent recovery, or must be a Federal facility.

* The facility must manufacture, process, or otherwise use a toxic chemical onsite. Storage is not reportable under Section 313. Certain "otherwise uses" are also exempt.

* The facility must exceed employee-hour and chemical use thresholds for reporting. Currently, reporting is required if more than ten full-time employees work the site during a calendar year and if chemical use exceeds reporting thresholds, which range from 10,000 lbs. chemical used/year to 25,000 lbs. chemical manufactured or processed per year. The USEPA has proposed lowering these chemical use thresholds significantly for some persistent, bioaccumulative, toxic chemicals such as dioxins (64 FR 687, 5 Jan 99).

Each year by 1 July, a facility meeting the reporting criteria must complete and file with states and USEPA a reporting form for every toxic chemical exceeding chemical use thresholds. The reporting form, known as Form R, does not report chemical use. Rather, the reporting form reports pounds per year of onsite chemical release to air, land, and water; onsite waste management by treatment, disposal, recycling, or energy recovery; and offsite transfers for waste management. The current Form R is five pages long and comes with an instruction manual that is over 150 pages long. The current USEPA questions and answers document for RTK reporting is over 200 pages long.

The essence of RTK compliance is good recordkeeping. Facilities are required to keep all records for three years that support both reporting and not reporting, chemical use facility wide, and chemical releases and transfers. The USEPA may inspect a facility to review reporting records.

Perhaps the best way to understand RTK reporting is to look at what Congress, regulators, and the public have done with the data:

* The USEPA publishes an annual Public Data Release summarizing the year's RTK report by industry, by chemical, and by state. All the data is made available in a computerized form. Typically, the media report local and national RTK data—sometimes sensationally.

* The Environmental Defense Fund uses the RTK data at its "Scorecard" Web site. At the site, visitors can enter a zip code and see the total RTK reporting of emissions for that zip code, the list of reporting facilities and their detailed emissions, and facility contacts to whom the public can address concerns.

* Congress in revising the Clean Air Act used RTK data to target chemicals and processes for emissions standards. Recently, the USEPA used RTK data to prioritize chemicals, waste streams, and facilities for increased inspection and regulation.

* A public interest group based an environmental justice lawsuit against the Anniston Army Depot on RTK data.

For non-Federal facilities, including GOCO contractors, non-compliance can result in severe civil and criminal penalties. For Federal facilities reporting due to EO 12856, no civil or criminal penalties or public right of lawsuit is permitted. Under the EO, the USEPA is allowed to inspect Federal facilities for RTK compliance and to issue notices of non-compliance to the facility, its Federal agency HQ, and the White House.

How does RTK affect range clearance now?

This section reviews range clearance against the toxic chemical list, the chemical uses that are reportable, the employee-hour and use reporting thresholds, and reviews DoD and EPA policy.

Munitions include chemicals that could be reportable, such as lead and lead compounds, mercury compounds, barium and barium compounds, nitroglycerin, and white phosphorus in energetics, copper in casings, lead in projectiles, and organic chemicals such as propene or benzene that are created as byproducts of detonation or burn.

Neither the USEPA nor DoD have had experience applying RTK chemical use definitions and exemptions to munitions activities. Munitions' intended use as defined by the Military Munitions Rule could meet the RTK definition of chemical "otherwise use" and the creation of toxic chemical byproducts of detonation does meet the RTK definition of chemical manufacturing.

Whether or not a range will meet the employee-hour reporting criteria depends on the location of the range, the amount of maintenance done at the range, and the type of range. The employee-hour determination will be a local one.

RTK reporting combines chemical releases and waste management from all activities onsite rather than breaking them out by activity. A result of this is that a chemical's use, releases, and waste management from range clearance will be added to that chemical's use, releases, and waste management from other munitions activities and from other chemical use activities onsite. Chemical use in or by range clearance alone may not exceed chemical use reporting thresholds, but chemical use from all munitions activities at a typical Army training installation may exceed reporting thresholds.

In March 1998, DoD issued a policy requiring RTK reporting of munitions' demilitarization activities beginning 1 Jul 00. DoD continues to exempt munitions' intended use, including range clearance, from RTK reporting until final policy is developed. The USEPA, in site visits to DoD installations and in other public and private meetings, continues to insist that toxic chemicals released from munitions' intended use should be reported in accordance with RTK guidance.

How could RTK reporting affect range clearance?

The table below shows typical range clearance activities, possible RTK reporting status of the activity, and explanation. Note that the final RTK reporting decision would require a site-specific review of employee-hour and reporting thresholds and other reporting exemptions.

Activity	Status	Explanation
Emergency response off DoD installation at private property, FUDS, or non-DoD Federal facility	RTK reporting not required by DoD but may be required by facility owner/operator	RTK reporting is facility specific. The owner or operator of the facility has the obligation to report, rather than contractors or activities onsite. EOD personnel responding off DoD installations do not create an RTK reporting obligation for DoD
EOD training onsite	Include in RTK reporting	EOD training on a DoD facility is "intended use" under Mil Munit Rule and may meet the RTK "otherwise use" criteria
Active range clearance	Include in RTK reporting	Active range clearance at a DoD facility is "intended use" under Mil Munit Rule and may meet the RTK "otherwise use" criteria. Note that if the UXO is transported to a RCRA permitted site for OB/OD, it is still reportable under the existing DoD policy for RTK and munitions demil
Inactive/closed range clearance	RTK reporting not required	Inactive or closed range clearance qualifies for the RTK exemption for remediation.

How could changes to EPCRA affect range clearance?

This section reviews possible changes to EPCRA reporting by Federal facilities and their impacts to range clearance.

Under existing RTK exemptions, toxic chemicals used for the following activities do not have to be reported:

* Unit-level motor vehicle maintenance, including fuel and antifreeze

* Facility and grounds upkeep, including painting and pesticide application

* Runway deicing

* Domestic wastewater treatment

In the future, the USEPA may review all RTK exemptions and determine their applicability to Federal facilities. One possible result of this review might be the removal of all exemptions to RTK reporting for Federal facilities.

EO 12856 set a reduction goal for Federal facilities based on RTK reporting. In implementing EO 12856, the DoD exempted all munitions activities except GOCO manufacture from the EO reduction goal. Future executive orders may continue RTK reduction goals and may incorporate munitions use and demil activities into the reduction baseline and goal.

What are the requirements for EOD personnel?

This section reviews requirements for tracking, reporting, and explaining that EOD personnel may face as a result of RTK reporting.

RTK reporting is a garrison responsibility. Tenants and activities onsite must assist the garrison by providing annual chemical use, release, and waste management information. It is anticipated that existing policies and systems for tracking munitions will support RTK reporting.

For range clearance, EOD personnel will need to track and report to garrison staff the following information by calendar year:

* Location of all new UXO managed during the calendar year. At a minimum, EOD personnel should be able to place the UXO within a particular range boundary.

* UXO identity. Acting with all regard for safety, EOD personnel should identify the UXO stock number, identification code, or provide written description. If conclusive identification is impossible, personnel should use best professional judgment. Identification should also include observations about missing parts of the munition or other damage. Reliable identification of the munition is necessary to determine the toxic chemicals contained in the munition that may be RTK reportable.

* Disposition of the UXO, whether left undisturbed, detonated in place, transported and stored, or transported to another OD site.

* Amount and identification of donor material used for detonation.

EOD personnel are not responsible for determining the composition and weights of toxic chemicals in the munitions.

Following RTK reporting, garrison staff may need to answer questions from HQDA, DoD, the public, or Congress. EOD personnel may need to assist. Example questions that may be asked include the following:

* How much of the chemical releases from all munitions activities (including range clearance) resulted from activities near or upwind from a particular neighborhood or building beyond the facility boundary or a known endangered species habitat? (Existing tracking systems may need to be improved to allow more precise location of UXO during range clearance.)

* Why was open detonation used for range clearance? Why couldn't the UXO be transported to a recovery facility?

What tracking and reporting tools are under development?

This section briefly reviews a tool that could be used to enhance UXO tracking, the USMC UXO Site Management Model, and a tool that is intended to simplify RTK chemical use and emission calculations, the Joint Service EPCRA Workgroup Data Delivery System.

The USMC has developed a UXO Site Management Model (SMM) at 29 Palms that integrates existing systems and provides expanded reporting and analysis capabilities. The SMM is designed to integrate ammunition supply point issue and return data, range scheduling software data, data on dud location and type entered by range users, and data from EOD operations entered by EOD personnel. The integrated SMM reconciles these different tracking systems and permits more systematic range clearance.

One of the more useful features of the SMM is the use of palm size computers by range users to enter dud location and type immediately and easily, using templates created for the facility. The data can be downloaded to the SMM once the users return from training. A weakness of existing range management systems is a reliance on verbal transmission of use and dud data at the end of the training, typically when the unit is tired and hurrying to complete the exercise. The accuracy of this verbal data is questionable.

The Joint Service EPCRA Workgroup is developing a Data Delivery System (DDS) to package munition chemical composition and emission data not usually available at training installations. The DDS will contain toxic chemical identities

and amounts by munition, as provided by reliable sources such as technical data packages or MIDAS. The DDS will also contain emission factors for munitions and munitions families, based on testing done at the Dugway Proving Ground Bang Box and on modeling.

To use the DDS, installation environmental personnel will enter each munitions NSN, DODIC, or description, the total number of rounds used during the calendar year, and other information about the disposition of the munition (for example, open detonated, fired, etc.). The DDS will produce reports of total chemical use and release from munitions activities at the facility during the year. These reports can then be used to determine which toxic chemicals require RTK reporting and to complete the RTK report.

The DDS cannot automate all RTK reporting. Facilities will need to review RTK exemptions against munitions activities and DoD guidance and to review and add in other non-munition chemical use and emissions.

The DDS will be tested in Summer 1999 and fielded January 2000 for use in RTK reporting of munitions demilitarization.

What are the impacts to the cost of readiness?

RTK reporting will add to the cost of Army environmental compliance. The U.S. Army Environmental Center estimated that a typical installation may spend up to $60,000 per year complying with RTK reporting, whether or not that installation actually reports. Much of the expense is due to the need to collect chemical use data and to document reporting decisions.

Other impacts of RTK reporting cannot easily be separated from the impact of regulatory initiatives under other environmental regulations. No installations or ranges will be permitted, fined, or closed due to RTK reporting alone or the installation's failure to report. On the other hand, regulators do use RTK reporting (among other factors) to target facilities for multimedia compliance inspections. Increased RTK reporting due to munitions activities may result in increased visibility and increased regulatory interest.

Army installations have often suffered for not being able to quantify the amounts and risk of chemicals released from munitions activities. RTK reporting will be used both to support and to rebut requests for environmental sampling, risk analyses, and continued monitoring.

RTK data could be used to support environmental justice claims.

The purpose of RTK reporting is to begin a discussion between facilities and their communities about the impacts to the community of the facility's business

practices. As the Army has often seen, once such a discussion begins, it can be long and can raise unforeseen and not easily answered questions. How the Army manages RTK reporting of munitions will have great impacts to future costs of Army environmental compliance and military readiness.